Gradient decent. Doing it your self

Weights are changed in the opposite direction of the gradient of the error

$$w_i' = w_i + \Delta w_i$$

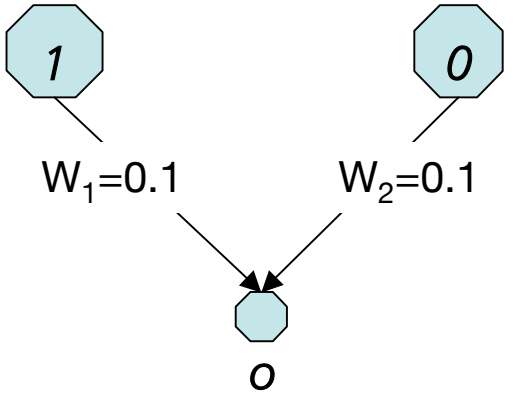
$$E = \frac{1}{2} \cdot (O - t)^2$$

$$O = \sum_i w_i \cdot I_i$$

$$\Delta w_i = -\varepsilon \cdot \frac{\partial E}{\partial w_i} = -\varepsilon \cdot (O - t) \cdot I_i$$

Linear function

$$O = I_1 \cdot w_1 + I_2 \cdot w_2$$



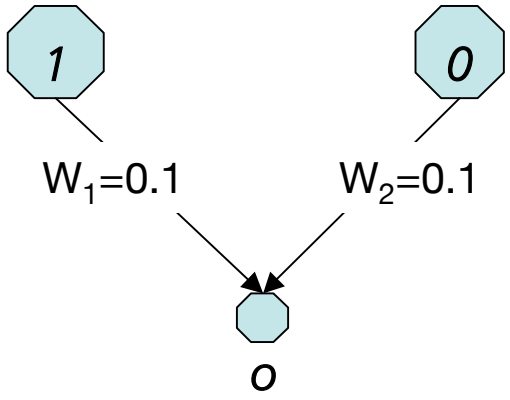
What are the weights after 2 forward/backward iterations with the given input, and has the error decrease (use ε=0.1, and t=1)?

Fill out the table

What are the weights after 2 forward/backward iterations with the given input, and has the error decrease (use ε=0.1, t=1)?

Linear function

$$O = I_1 \cdot w_1 + I_2 \cdot w_2$$



itr	W1	W2	O
0	0.1	0.1	
1			
2			